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Hans-Dieter Bothe

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EXAMINER

VILLECCO, JOHN M

ART UNIT

PAPER NUMBER

2622

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12/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,375	Applicant(s) BOTHE ET AL.	
	Examiner JOHN M. VILLECCO	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-16 and 18-22 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed April 21, 2005 fails to comply with the provisions of 37 CFR 1.97, 1.98, MPEP § 609, MPEP § 1893.03(a) and § 1893.03(g). MPEP § 1893.03(g) states that when the Notice of Acceptance of Application (Form PCT/DO/EO/903) lists the copy of the international search report and the copies of the references cited therein are present in the national stage file, then the Examiner is obligated to consider the references listed in the international search report. See MPEP § 1893.03(a) for an example of a Notice of Acceptance of Application (Form PCT/DO/EO/903) that shows that copies of the references cited in the international search report are included. However, in this case, the Notice of Acceptance of Application (Form PCT/DO/EO/903) lists only that the International Search Report is included. Furthermore, MPEP § 1893.03(g) goes on to state "Otherwise, applicant must follow the procedure set forth in 37 CFR 1.97 and 1.98 in order to ensure that the examiner considers the documents cited in the international search report". For this reason it is the Examiner's position that it is applicant's responsibility to provide these documents to be made of record. The documents that were not provided will not be considered until provided in another IDS submission. It has been placed in the application file, but the information referred to therein

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has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Drawings

3. The drawings are objected to because Figures 1-5 are block diagrams and “short catchwords” for each of the blocks are indispensable for understanding. See MPEP § 1893.03(f) and PCT Rule 11.11(a). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 12-14, 16, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (U.S. Patent No. 5,822,542).**

7. Regarding ***claim 12***, Smith discloses a surveillance system with an auto-diagnosis function for determining problems with attached cameras. More specifically and as it relates to the applicant's claims, Smith discloses an image acquisition unit (video camera, 520) for generating at least one image signal, and an evaluation unit (microprocessor, 592) configured to monitor the imaging sensors operability based on the image signal. See column 77, lines 10-67. and Figures 2, 3, and 120. The imaging sensors operability is interpreted to be satisfactory performance.

8. As for ***claim 13***, Smith discloses that during the auto-diagnosis operation a value is obtained from a captured image and compared to a limit value to monitor the imaging sensors operability. See column 77, lines 40-47.

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9. With regard to *claim 14*, Smith discloses that if an unsatisfactory camera is indicated, a warning can be displayed. See column 77, lines 60-66. Additionally, Smith discloses the use of a display (524) and output ports on the VR/PC unit for outputting to the display. See Figure 7 and column 18, lines 10-28.

10. Regarding *claim 16*, Smith discloses that the operability is determined based on a profile of the image signal. The high frequency components and the color distribution are interpreted to be the profiles of the image signal. See column 77, lines 30-33.

11. As for *claim 19*, Smith discloses the use of a microprocessor (592) in the VR/PC unit that acts as both the diagnostic unit and the evaluation unit, since it operates to both schedule an auto-diagnosis function and to carry out the auto-diagnosis function.

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. **Claim 12 is rejected under 35 U.S.C. 102(e) as being anticipated by Motta et al. (U.S. Patent No. 6,726,103).**

14. Regarding *claim 12*, Motta discloses an imaging sensor with a built in diagnostics mode. More specifically and as it relates to the applicant's claims, Motta discloses an image acquisition unit (image sensor, 302) for generating at least one image signal, and an evaluation unit

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(processor, 306) configured to monitor the imaging sensors operability (defective pixels) based on the image signal. See column 4, line 61 to column 5, line 5.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. **Claims 15 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (U.S. Patent No. 5,822,542) in view of Cofer et al. (U.S. Patent No. 6,841,780).**

17. Regarding *claim 15*, as mentioned above in the Smith discussion of claim 13, Smith discloses all of the limitations of the parent claim. Smith, however, fails to explicitly disclose that the image signal is generated based on at least one invariant pattern. Cofer, on the other hand, discloses an image comparison system in which a pattern is projected onto a scene when capturing images. More specifically, Cofer discloses projecting a pattern onto the scene and then capturing that scene to compare to a reference scene. See column 4, lines 20-60. Furthermore, Cofer discloses that the pattern is a static pattern. The Examiner is interpreting the static pattern to be an invariant pattern. Furthermore, Cofer discloses that the use of the static pattern allows for the detection of differences between images with less susceptibility to dynamic lighting conditions and/or more sensitive to 3-D object motion and/or presence. See column 1, lines 48-51. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to capture an image using an invariant pattern in Smith to compare to a

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captured reference image so that the detection of difference between images can be done with less susceptibility to dynamic lighting.

18. As for *claim 22*, as mentioned above in the Smith discussion of claim 12, Smith discloses all of the limitations of the parent claim. Smith, however, fails to explicitly disclose an illumination device configured to provide a pattern, wherein the image acquisition unit generates the image signal based on the pattern. Cofer, on the other hand, discloses an image comparison system in which a pattern is projected onto a scene when capturing images. More specifically, Cofer discloses an illumination device (illumination source, 2) for projecting a pattern onto the scene and then capturing that scene to compare to a reference scene. See column 4, lines 20-60. Furthermore, Cofer discloses that the use of the pattern allows for the detection of differences between images with less susceptibility to dynamic lighting conditions and/or more sensitive to 3-D object motion and/or presence. See column 1, lines 48-51. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to capture an image using an invariant pattern in Smith to compare to a captured reference image so that the detection of difference between images can be done with less susceptibility to dynamic lighting.

19. **Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (U.S. Patent No. 5,822,542) in view of Tagawa et al. (U.S. Patent No. 4,772,945).**

20. Regarding *claim 20*, as mentioned above in the Smith discussion of claim 13, Smith discloses all of the limitations of the parent claim. Smith, however, fails to explicitly disclose that the evaluation unit is manually activatable to monitor the operability. Tagawa, on the other hand, discloses a security camera system in which testing of the security camera system can be

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done manually or automatically. More specifically, when a user selects a test switch (55) the operation of the security camera system is checked. See column 6, lines 14-66. Such a manual operation allows the operation of the image sensing system to be checked at any time.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the operability of Smith to be manually checked so that it may be checked at any time.

21. Claims 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motta et al. (U.S. Patent No. 6,726,103).

22. Regarding *claim 13*, as mentioned above in the in the Motta rejection of claim 12, Motta discloses all of the limitations of the parent claim. Motta, however, fails to explicitly disclose that the evaluation unit derives from the image signal at least one value and compares the at least one value with at least one limit value to monitor the imaging sensors operability. Official Notice is taken as to the fact that it is well known in the art to determine defective pixels by comparing a known pixel output to some defective pixel reference value. By comparing a captured pixel to a reference pixel one can easily and simply determine defective pixels. Therefore, it would have been obvious to one of ordinary skill in the art to detect the defective pixels in Motta by comparing the pixel values to a reference value.

23. As for *claim 18*, Motta discloses determining the defective pixels in a diagnostic mode. The diagnostic mode is interpreted to be an initialization phase.

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24. **Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (U.S. Patent No. 5,822,542) in view of Connell (U.S. Patent No. 5,581,625).**

25. Regarding *claim 21*, as mentioned above in the Smith rejection of claim 13, Smith discloses all of the limitations of the parent claim. Smith, however, fails to specifically disclose that the image sensor is configured to produce an image having depth resolution. Connell, on the other hand, discloses a camera surveillance system which uses an imaging system with two cameras to determine distances within captured images. More specifically, Connell discloses two cameras (46, 48) used to capture the image of a scene. The stereo image produced by the two cameras is used to obtain depth information on the scene. Connell discloses that such an arrangement can be used to determine distance to an object and to determine the number of objects in a scene. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the cameras of Smith stereoscopic cameras as in Connell, so that the security system can make distance measurement and determine the number of objects in a scene.

Allowable Subject Matter

26. Claim 17 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

27. The following is a statement of reasons for the indication of allowable subject matter:

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Regarding claim 17, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest comparing a first and second image from different image sensors to determine operability.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN M. VILLECCO whose telephone number is (571)272-7319. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOHN M. VILLECCO/
Primary Examiner, Art Unit 2622
December 11, 2008